Press Release

Whiffle contributes to WOZEP/Deltares Ecosystem Effects study

Delft, the Netherlands – 12 June 2019

As part of the WOZEP five-year research programme[1], Rijkswaterstaat, part of the Dutch ministry of Infrastructure and Water Management, in concert with the Dutch ministry of Economic Affairs and Climate Policy, asked Deltares – in cooperation with the Royal Netherlands Meteorological Institute (KNMI), Whiffle, and Wageningen Marine Research (WMR) - to identify and assess the cumulative effects of the possible large-scale deployment of OWF on the ecosystem of the North Sea.

Whiffle, a spin out of the Delft University of Technology, has developed a unique breakthrough in the application of Large Eddy Simulation (LES) for operational weather forecasting based on high performance computing systems. The sophisticated ultra-high resolution weather model "GRASP" includes the simulation of wind farms and clusters of wind farms to produce power output day-ahead forecasts for operations and trading.

For this study that was executed in 2018[2] Whiffle provided an overview of the application of weather and wake models for analysis of large scale effects due to offshore wind farms. Whiffle also analysed the data for the specific case of the Dutch – Belgian offshore wind farm zone to illustrate the blockage effects.
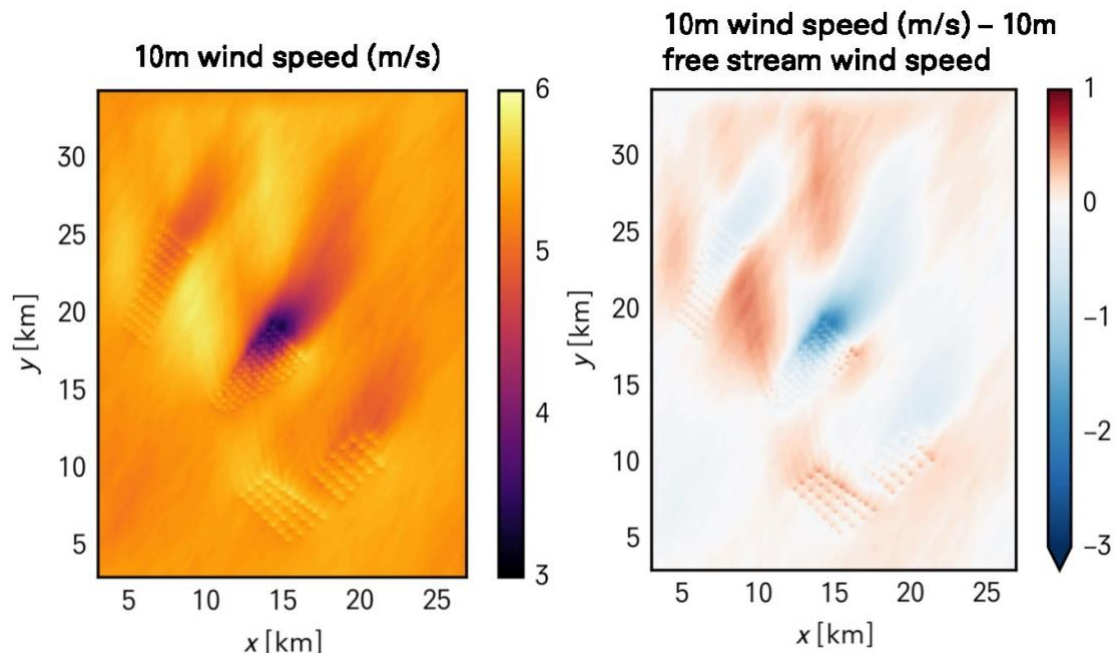

Figure from the report: One day average wind speed at 10m (left) and the difference between the 10m wind speed and the 10m free wind speed in the Borssele wind farm zone

---

[1] WOZEP website https://www.noordzeeloket.nl/functies-gebruik/windenergie-zee/ecologie/wind-zee-ecologisch/

[2] Deltares 2018, https://www.noordzeeloket.nl/functies-gebruik/windenergie-zee/ecologie/wind-zee-ecologisch/documenten-wozep-0/ecosysteemonderzoek/

Remco Verzijlbergh, director of operations of Whiffle:
"In this Deltares study, we were able to show a typical application of our GRASP LES model to simulate the complex situation in clusters of wind farms in varying meteorological circumstances. Local and global blockage effects are very relevant research subjects and critical to the farm planning and operations of wind farms."

About Whiffle

Whiffle B.V. has been operational since 2016 and was started as a spin out of the Delft University of Technology. With its roots in science, the company has continued cutting edge R&D to further develop the Large Eddy Simulation (LES) models and a unique implementation on high performance computing systems. This resulted in the world's first LES based operational weather model that can perform highly accurate and high-resolution weather forecasts. Application areas of Whiffle's model include wind and solar power projects, dispersion of air pollution, aviation and agriculture.

Whiffle B.V.

Molengraafsingel 12, 2629JD Delft, The Netherlands

info@whiffle.nl **https://weatherfinecasting.com/**